

Notice of Allowability

Application No.

10/809,343

Applicant(s)

HAMAMOTO, KAZUAKI

Examiner

Thomas L. Dickey

Art Unit

2826

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed 11/29/2005.
2. ☒ The allowed claim(s) is/are 1-13.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 11/29/2005 | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

Art Unit: 2826

REASONS FOR ALLOWANCE

1. The following is an examiner's statement of reasons for allowance:

Claims 1-13 are allowed over the references of record because none of these references disclosed or can be combined to yield the claimed invention such as a semiconductor sensor (see figure 2C) comprising a substrate; a membrane which is a thin part formed on a top surface of the substrate; and a thick portion which is formed in a portion excluding the thin portion from the substrate; wherein a hollow part is formed under the membrane by bonding a bottom of the substrate and a mounting surface on which the semiconductor sensor is mounted; at least a relief hole provided on the membrane for eliminating difference in pressure of a fluid between an inside and an outside of the hollow part while the sensor is in use and thus forming a pressure difference adjusting means, the at least a relief hole being provided on the membrane for the expansion or contraction of a fluid within the hollow part, **only** the relief hole communicating the hollow part to an outside of the semiconductor sensor, as recited in either of claims 1 and 10.

Barth 5,581,028 discloses a semiconductor sensor comprising a substrate 190; a membrane (seen, but no part # in figure 9. The equivalent part # in figure 5(K) identifies thin silicon nitride part 214) provided with at least a relief hole 196 for expansion or contraction, which is a thin part 192 formed on a top surface of the substrate 190; and a thick portion which is formed in a portion excluding the thin portion from the substrate

Art Unit: 2826

190; wherein a hollow part 198 is formed under the membrane 214 by bonding a bottom of the substrate 190 and a mounting surface 180 on which the semiconductor sensor 190 is mounted; a pressure difference adjusting means is provided for eliminating difference in pressure of a fluid between an inside and an outside of the hollow part 198 while the sensor is in use; the pressure difference adjusting means being at least the relief hole 196 for the expansion or contraction of a fluid within the hollow part 198. Note figure 9 and column 6 lines 26-47, 50-52 of Barth. However, Barth neither discloses nor suggests that **only** the relief hole 196 communicates the hollow part 198 to an outside of the semiconductor sensor.

2. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

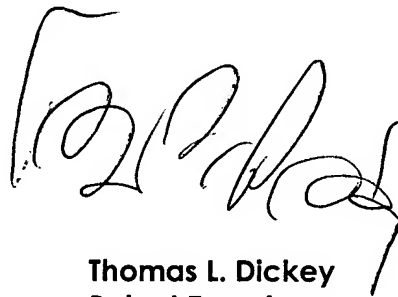
Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas L Dickey whose telephone number is 571-272-1913. The examiner can normally be reached on Monday-Thursday 8-6.

Art Unit: 2826

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan J Flynn can be reached on 571-272-1915. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'T. L. Dickey', is positioned above the printed name and title.

Thomas L. Dickey
Patent Examiner
Art Unit 2826
01/06